General

Guideline Title

Management of postabortion hemorrhage.

Bibliographic Source(s)

Kerns J, Steinauer J. Management of postabortion hemorrhage. Contraception. 2013 Mar;87(3):331-42. [93 references] PubMed

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The levels of the recommendations (A, B, C) are defined at the end of the "Major Recommendations" field.

Conclusions and Recommendations

The following recommendations are based on good and consistent scientific evidence (Level A):

1. In women with a uterine scar and a placenta previa at 16 or more weeks' gestation, an evaluation for placenta accreta is strongly recommended. If a formal radiologic evaluation cannot be done, a provider experienced in ultrasound should evaluate for placenta accreta. Ultrasound is recommended as a first step in evaluating for placenta accreta. If the diagnosis is uncertain, magnetic resonance imaging (MRI) should be considered.
2. Bleeding is likely to be greater with medical abortion than with surgical abortion, although the rates of hemorrhage remain low. Counseling regarding surgical and medical methods can address this increased risk of bleeding.

The following recommendations are based on limited or inconsistent scientific evidence (Level B):

1. Obtaining a preoperative hemoglobin or hematocrit in all women undergoing second-trimester abortion and anemic women undergoing first-trimester medical abortion.
2. In training settings, the routine use of intraoperative ultrasound may decrease the risk of incomplete abortion with first-trimester surgical abortion and may decrease the risk of perforation with standard dilation and evacuation (D&E).
3. Including vasopressin in a paracervical block may decrease blood loss from abortion.
4. Balloon tamponade can be an effective intervention for controlling brisk hemorrhage or hemorrhage refractory to massage and uterotonics and should be considered early in the process of bleeding and hemorrhage.
5. Uterine artery embolization (UAE) can effectively control hemorrhage caused by many etiologies. Where available in a timely manner, UAE

should be considered before hysterectomy for management of postabortion hemorrhage in patients whose perfusion can be maintained during UAE.
6. Uterotonic medications can help control hemorrhage from atony. For actively bleeding patients, methylergonovine maleate, misoprostol and vasopressin are appropriate first-line treatments, with methylergonovine maleate and vasopressin effecting the most rapid response.
7. Limited evidence exists for the prophylactic use of methylergonovine maleate prior to first-trimester abortion in reducing the need for re-aspiration.

The following recommendations are based primarily on consensus or expert opinion (Level C):

1. Fetal demise with fetus retained for 4 or more weeks may be associated with an increased risk of disseminated intravascular coagulopathy (DIC). Obtaining a preoperative coagulation parameter can be considered on an individualized basis, though this has not been studied.
2. For women at high risk of hemorrhage, referral to a hospital service or high-acuity center may decrease morbidity.
3. Oxytocin can be used as a uterotonic after second-trimester abortion.

Definitions:

Levels of Recommendations

Level A: Recommendations are based on good and consistent scientific evidence.

Level B: Recommendations are based on limited or inconsistent scientific evidence.

Level C: Recommendations are based primarily on consensus and expert opinion.

Clinical Algorithm(s)

The original guideline document includes the following algorithms:

- Algorithm for classifying women as being at low, moderate or high risk for hemorrhage after abortion
- Algorithm for a systematic approach to treatment of postabortion hemorrhage

Scope

Disease/Condition(s)

- Postabortion hemorrhage
- Unwanted pregnancy

Guideline Category

Management

Prevention

Risk Assessment

Treatment

Clinical Specialty

Family Practice

Internal Medicine

Obstetrics and Gynecology

Radiology

Intended Users

Advanced Practice Nurses

Health Care Providers

Physician Assistants

Physicians

Public Health Departments

Guideline Objective(s)

To review the medical literature on postabortion hemorrhage

Target Population

Female patients who are at increased risk of or with confirmed postabortion hemorrhage

Interventions and Practices Considered

1. Evaluation for placenta accreta (ultrasound or magnetic resonance imaging [MRI])
2. Counseling regarding surgical and medical abortion methods
3. Measurement of preoperative hemoglobin or hematocrit
4. Intraoperative ultrasound
5. Inclusion of vasopressin in a paracervical block
6. Balloon tamponade
7. Uterine massage
8. Uterine artery embolization (UAE)
9. Uterotonic medications (e.g., methylergonovine maleate, misoprostol, vasopressin, oxytocin)
10. Re-aspiration
11. Obtaining a preoperative coagulation parameter
12. Referral to hospital or high-acuity center

Major Outcomes Considered

- Sensitivity and specificity of imaging techniques
- Morbidity and mortality related to postabortion hemorrhage
- Risk factors for postabortion hemorrhage
- Frequency of placenta accreta
- Efficacy of treatment

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The MEDLINE database was used to identify references published between 1955 and December 2011. The database was searched for the following terms: abortion, hemorrhage, abortion complications, bleeding. Abstracts of all languages were included. The abstracts were reviewed and relevant articles obtained. Citations from these journals were reviewed, as well as contemporary textbooks. PubMed and Google Scholar were searched in English for publications regarding abortion and contraception. In addition, reference lists of identified manuscripts were searched for any additional studies that might be relevant. The guideline authors also searched the Cochrane Database of Systematic Reviews.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Studies were reviewed and evaluated for quality according to the method outlined by the U.S. Preventive Services Task Force:

I: Evidence obtained from at least one properly designed randomized controlled trial.

II-1: Evidence obtained from well-designed controlled trials without randomization.

II-2: Evidence obtained from well-designed cohort or case–control analytic studies, preferably from more than one center or research group.

II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

Methods Used to Analyze the Evidence

Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Levels of Recommendations

Level A: Recommendations are based on good and consistent scientific evidence.

Level B: Recommendations are based on limited or inconsistent scientific evidence.

Level C: Recommendations are based primarily on consensus and expert opinion.

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

These guidelines were reviewed and approved by the Board of the Society of Family Planning.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Appropriate management of postabortion hemorrhage

Groups Most Likely to Benefit

Prior cesarean sections place women at higher risk of overall complications from second-trimester abortion, with one study demonstrating odds of complications seven times as great among women with two or more cesarean sections as among those with none. The three most common complications included hemorrhage, atony and cervical laceration. Obesity may be a risk factor for increased blood loss with dilation and evacuation (D&E), though no well-designed studies have addressed this question. Women with bleeding disorders secondary to either anticoagulation therapy or bleeding diatheses should be identified through a detailed history. Although limited evidence suggests that significant bleeding with first-trimester abortion among anticoagulated patients is not common, it may theoretically be more common during second-trimester abortion. See Figure 1 in the original guideline for an algorithm for classifying women as being at low, moderate or high risk for hemorrhage after abortion.

Potential Harms

- False-positive and false-negative results of imaging
- Intensive interventions such as uterine artery embolization (UAE), laparoscopy, laparotomy and hysterectomy may be necessary in the event that primary and secondary treatment measures are unsuccessful in controlling bleeding. In one series, two complications of UAE were

noted: one contrast reaction treated with diphenhydramine and one femoral embolus requiring emergent embolectomy. Because UAE is associated with less morbidity and mortality than laparotomy and hysterectomy, the guideline authors recommend attempting UAE prior to more invasive measures in settings where UAE is available.

Qualifying Statements

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This evidence-based review should guide clinicians, although it is not intended to dictate clinical care.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Clinical Algorithm

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Safety

Timeliness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2013 Mar

Guideline Developer(s)

Society of Family Planning - Professional Association

Source(s) of Funding

The Society of Family Planning receives no direct support from pharmaceutical companies or other industries.

Guideline Committee

Not stated

Composition of Group That Authored the Guideline

Authors: Jennifer Kerns, MD, MPH, and Jody Steinauer, MD, MAS

Financial Disclosures/Conflicts of Interest

Jennifer Kerns, MD, MPH, and Jody Steinauer, MD, MAS, report no significant relationships with industries relative to these guidelines.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the Society of Family Planning Web site .

Availability of Companion Documents

None available

Patient Resources

None available

NGC Status

This NGC summary was completed by ECRI Institute on January 13, 2014. The information was verified by the guideline developer on February 10, 2014.

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